

## CALL FOR POSTDOCTORAL RESEARCH POSITION

### Machine Learning in Massive Star Spectroscopy

#### *ALMA-ANID 2023 FUND*

The University Mayor (UMAYOR) extends an invitation for qualified candidates to apply for a postdoctoral research position, for two years, focusing on massive star spectroscopy.

The selected researcher will engage in a comprehensive analysis, employing machine learning and/or deep learning techniques, to compare synthetic spectral models with observational data. This analysis will be facilitated using our synthetic database ISOSCELES, with the goal of deriving stellar and wind parameters from massive stars.

This opportunity involves collaboration with Dr. Ignacio Araya and Dr. Felipe Urbina at the Centro Multidisciplinario de Física at UMAXOR, located on the Huechuraba campus in Santiago. The successful applicant will actively collaborate with astronomers Dr. Michel Curé, Dr. Catalina Arcos, and statistician Dr. Alejandra Christen from the Universidad de Valparaíso (UV). Additionally, collaboration with machine learning experts Dr. Raquel Pezoa from Universidad Técnica Federico Santa María (USM) and Dr. Pedro Escárate and Dr. Gonzalo Farías from Pontificia Universidad Católica de Valparaíso (PUCV) is a key aspect of this role. The research team, comprising distinct subgroups, will convene regularly through online meetings with the postdoctoral researcher. Furthermore, the selected fellow is expected to spend at least one week every three months at each collaborating institution in Valparaíso (UV, USM, and PUCV), participating in seminars, group meetings, and other collaborative activities.

This two-year position offers a competitive salary for postdoctoral researchers in Chile (27,148,800 CLP per year), ensuring a comfortable standard of living. An additional 500,000 CLP per year is allocated for medical insurance, and a budget of 4,500,000 CLP per year is provided for travel and other research expenses, including equipment. The researcher will have access to various High-Performance Computing (HPC) facilities and a 10% allocation of Chilean telescope time.

The position's starting date is flexible, with preference given to earlier arrivals. Applications, including a CV with a list of publications, a research interest statement (maximum 3 pages), and contact details for 2 referees, should be submitted via email to Dr. Ignacio Araya ([ignacio.araya@umayor.cl](mailto:ignacio.araya@umayor.cl)). The review of applications will commence on February 26th, 2024.

In alignment with our commitment to promoting diversity and equality, especially within our research center, we strongly encourage applications from women. Female candidates will be given preference as part of our ongoing efforts to foster an inclusive academic environment.